

*REMARKS/ARGUMENTS*

*The Pending Claims*

Claims 28, 30, 32, 34-38, 40-44, 46, and 47 are pending.

*Amendments to the Claims*

Claim 28 has been amended to recite the features of claim 29 (now canceled). Claims 28, 30, and 41-44 have been amended to recite a computer readable medium containing a program, as supported by original claim 45 (now canceled) and the specification at, for example, page 6, lines 5-11, and the Abstract. Claim 34 has been amended to recite the features of claim 39 (now canceled) and to recite that a computer executes the recited method steps as supported by the specification and claims as originally filed.

In view of the cancelation of claims 29 and 39, claim 30 has been amended to depend from claim 28, and claim 40 has been amended to depend from claim 34. Claim 47 is new and recites that the computer-readable recording medium of claim 28 is selected from a particular group, as supported by the specification at, for example, page 70, lines 25-30.

No new matter has been added by way of these claim amendments.

*Summary of the Office Action*

The Office indicates that claims 32 and 46 are allowable.

The Office objects to the specification because Figure 20 contains sequences that are not identified by sequence number.

The Office rejects claims 28-30 and 34-45 under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter.

Reconsideration of these objections and rejections is hereby requested.

*Discussion of the Objection to the Specification*

The Office contends that Figure 20 contains multiple sequences that have not been assigned sequence identification numbers or submitted in a sequence listing. Applicants note

that the amino acid sequence of Figure 20 is a branched amino acid sequence (and not a linear/unbranched amino acid sequence). Branched sequences are excluded from the requirements of 37 C.F.R. §§ 1.821 through 1.825. Accordingly, the amino acid sequence of Figure 20 does not need to be identified by a sequence identification number.

For this reason, Applicants request that the objection to the specification be withdrawn.

*Discussion of the Section 101 Rejections*

The Office rejects claims 28-30 and 34-45 for allegedly encompassing non-statutory subject matter. Applicants traverse the rejections for the following reasons.

The Office contends that claims 28-30 and 41-44 are directed to a program and do not have a limitation of being on a computer-readable medium. The claims have been amended to recite a computer-readable medium comprising a program.

The Office contends that claims 28, 34-38, and 41-45 do not require production of a tangible result in a form that is understandable to the user of the process or apparatus. Applicants have amended claims 28 and 34 (and, thus, claims 35-38 and 41-44 dependent thereon) to recite the features of claims 29 and 39, respectively. Claim 45 has been canceled. Applicants note that claims 29 and 39 were not included in the Office's rejection. Therefore, Applicants believe the amendments to the claims to recite the features of claims 29 and 39 overcome the Office's concerns.

The Office contends that claim 45 recites a computer-readable recording medium, but that the definition in the specification does not exclude a medium that is a signal. Claim 45 has been canceled; however, claim 28, as amended, recites similar subject matter as claim 45. Applicants note that the claims (i.e., claim 28 and claims dependent thereon) do not read on embodiments that are not physical computer-readable media that are conventional in the art.

The Office contends that claims 34-40 recite a process that is not limited to a particular apparatus or machine and do not require transformation of an article to a different state or thing. Claim 34 (and, thus, claims 35-38 and 40 dependent thereon) has been


amended to recite that a computer executes the method steps. Claim 39 has been canceled. Applicants believe that the claim amendment overcomes the Office's concerns.

For the foregoing reasons, the pending claims, as amended, do not encompass non-statutory subject matter. Accordingly, Applicants request that the Section 101 rejections be withdrawn.

*Conclusion*

If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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